

Applicants: Soderlund, H. *et al.*  
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61 cont.  
the target nucleic acid polymer flanking the 3' end of the predetermined position, such that the oligonucleotide detection primer, when hybridized to the target nucleic acid polymer, forms an oligonucleotide detection primer extension product by an enzyme catalyzed chain extension nucleic acid polymerization that adds to the oligonucleotide primer the labelled nucleotide complementary to the specific nucleotide at the predetermined position in the target nucleic acid polymer in the presence of the polymerizing agent.

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52. [Amended] A reagent kit according to Claim 51, wherein the oligonucleotide detection primer comprises an attachment moiety.

53. [Amended] A reagent kit according to Claim 51, wherein the oligonucleotide detection primer has a length of from 10-40 nucleotide residues.

54. [Amended] A reagent kit according to Claim 51 having the sequence 5'-GCG CCG ACA TGG AGG ACG TG-3'.

55. [Amended] A reagent kit according to Claim 51 having the sequence 5'-ATG CCG ATG ACC TGC AGA AG-3'.

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56. [Amended] A reagent kit according to Claim 51 having the sequence 5'-GTA

CTG CAC CAG GCG GCC GC-3'.

57. [Amended] A reagent kit according to Claim 51 having the sequence 5'-GGC

CTG GTA CAC TGC CAG GC-3'.

58. [Amended] A reagent kit according to Claim 51 having the sequence 5'-CAT

GGT GCA CCT GAC TCC TG-3'.

59. [Amended] A reagent kit according to Claim 51 having the sequence 5'-CAG

TAA CGG CAG GCG GCC GC-3'.

60. [Amended] A reagent kit according to Claim 51 having the sequence 5'-AAG

GCA CTC TTG CCT ACG CCA-3'.

61. [Amended] A reagent kit according to Claim 51 having the sequence 5'-AGG

CAC TCT TGC CTA CGC CAC-3'.

62. [Amended] A reagent kit according to Claim 51 having the sequence 5'-AAC

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TTG TGG TAG TTG GAG CT-3'.

63. [Amended] A reagent kit according to Claim 51 wherein the oligonucleotide detection primer is immobilized to a solid support.

E2  
cont  
64. [Amended] A reagent kit according to Claim 51 wherein the labeled nucleotide is a deoxyribonucleotide triphosphate.

65. [Amended] A reagent kit according to Claim 51 wherein the labeled nucleotide is a chain terminating nucleotide.

66. [Amended] A reagent kit according to Claim 65 wherein the labeled nucleotide is a dideoxynucleotide triphosphate.

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67. [Amended] A reagent kit according to Claim 51 wherein the oligonucleotide primer extension product is immobilized to a solid support.

E3  
68. [Amended] The reagent kit according to claim 51 further comprising a double stranded hybrid wherein the oligonucleotide primer is hybridized to the target nucleic acid polymer immediately adjacent to the predetermined position.

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69. [Amended] An oligonucleotide detection primer extension product comprising:  
an oligonucleotide detection primer having a nucleotide sequence complementary  
to and capable of hybridizing to a region [in the] of a target nucleic acid polymer flanking the 3'  
end of a predetermined position, wherein the sequence between the 3' end of the oligonucleotide  
detection primer and the specific nucleotide at the predetermined position in the target nucleic  
acid polymer does not contain a nucleotide residue of the same type as the specific nucleotide at  
the predetermined position in the target nucleic acid polymer, wherein said oligonucleotide  
detection primer has been extended by an enzyme catalyzed chain extension nucleic acid  
polymerization that adds to the oligonucleotide detection primer a labeled nucleotide  
complementary to the specific nucleotide at the predetermined position in the target nucleic acid  
polymer [in the presence of a polymerizing agent].

#### REMARKS

The Examiner has rejected claim 68 under 35 U.S.C. §112, first paragraph, for not  
providing support in the specification for a double stranded hybrid. It is respectfully submitted  
that double stranded hybrids are taught throughout the specification. For example, the Examiner  
is directed to figure 1, where it is demonstrated that the double stranded hybrid includes the target  
nucleic acid hybridized to a primer.